

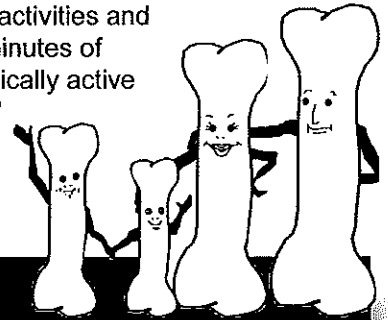
LESSON 3

Physical Activity: Nutrition's Partner for Health

Student Learning Objectives:	National Health Education Standards:
1. Identify enjoyable physical activities.	• Core Concepts
2. Describe the importance of being physically active 60 minutes each day.	• Core Concepts
3. Describe how eating healthy foods and being physically active promotes health.	• Core Concepts
4. Create combination foods using foods from the food groups, focusing on foods that provide calcium and vitamin D.	• Self Management

Lesson Synopsis

Review combination foods and foods to eat in limited amounts. List enjoyable physical activities and identify the reasons being physically active is important, noting the recommended 60 minutes of physical activity for young people. Describe how eating nutritious foods and being physically active promotes health using the example of building strong bones. Create new "combination" foods from the food groups. Combine physical activities that strengthen bones and foods that provide calcium and vitamin D using a worksheet. Identify personal choices of combination foods and physical activities. Summarize the unit.



Activity	Time in Minutes	Materials Needed
Introduction	3	• None
Teacher Input	10	Health Education Materials <ul style="list-style-type: none"> • Poster Set: "MyPlate: Know Your Food Groups," Michigan Model for Health Clearinghouse (Suggestion) Teacher Manual Resources <ul style="list-style-type: none"> • Teacher Master: "Benefits of Physical Activity" Supplied by the Teacher <ul style="list-style-type: none"> • Computer with Internet connection (Extension Activity)
Application or Skill Practice	15	Health Education Materials <ul style="list-style-type: none"> • Pictures: "Food Photos," Michigan Model for Health Clearinghouse, one set, or Food Models, National Dairy Council, two sets Teacher Manual Resources <ul style="list-style-type: none"> • Student Worksheet: "Calcium and Vitamin D + Physical Activity = Strong Bones" Supplied by the Teacher <ul style="list-style-type: none"> • Pencils or pens • Paper (Extension Activity) • Art supplies (Extension Activity) • Computer (Extension Activity)
Closure	2	Teacher Manual Resources <ul style="list-style-type: none"> • Family Resource Sheet: "Calcium and Vitamin D + Physical Activity = Strong Bones"
TOTAL	30	

Preparation

For Teacher Input:

- **Duplicate one copy** of the teacher master, "Benefits of Physical Activity." **Cut apart the slips** of paper with phrases on them.

For Application or Skill Practice:

- **Decide how to divide** your class into small groups with four or five students in each group.
- **Remove the combination foods** from the food pictures.
- **Decide** if you want to leave the foods with "empty" calories in the set of food pictures you will use for the activity or if you want to remove them. (Suggestion)
- **Duplicate** the student worksheet, "Calcium and Vitamin D + Physical Activity = Strong Bones," for each student.

For Closure:

- **Duplicate** the family resource sheet, "Calcium and Vitamin D + Physical Activity = Strong Bones," for students to take home.

LESSON PROCEDURE






Introduction: Introduce the "partnership" between healthy eating and physical activity.


Approximately 3 minutes

Instructional Steps	Script & Detailed Directions	Extensions & Suggestions
Ask students to define and give examples of combination foods and foods they should limit.	<p>Have students stand up.</p> <p><i>Run in place if you think you can tell us what a combination food is.</i></p> <p>Call on students who are running to define "combination" foods.</p> <p>Answer: a food made of more than one food group</p> <p><i>Reach for the ceiling if you can think of an example.</i></p> <p>Answers: tacos, pizza, macaroni and cheese, peanut butter and jelly sandwich, etc.</p> <p><i>Bend to the left and then to the right if you can tell us the name of two foods we should limit and why.</i></p> <p>Answers: Examples are soda, cake, pie, French fries, candy, butter, etc. The reason is that these foods do not provide many of the building blocks, or nutrients, needed for health.</p>	
Introduce the day's topic.	<p><i>Some of you have been running and stretching. Today we will learn how important it is to be physically active and how physical activity and eating nutritious foods work together to help us stay healthy.</i></p>	

Teacher Input: Identify enjoyable physical activities and describe the importance of being physically active 60 minutes every day. Describe how physical activity and healthy eating work together to promote health.





Approximately 10 minutes

Instructional Steps	Script & Detailed Directions	Extensions & Suggestions
<p>Have students list their favorite physical activities.</p> <p>List the benefits of being physically active using the slips of paper from the teacher master, "Benefits of Physical Activity."</p>  <p>Emphasize the amount of time recommended for physical activity for young people.</p>	<p><i>Physical activities are activities that involve moving your body, such as riding your bike or playing ball or raking the lawn.</i> <i>What physical activities do you enjoy?</i></p> <p>Record their ideas on the board.</p> <p><i>There are lots of reasons to be physically active. One reason is that it's fun! Let's see if we can list more reasons.</i></p> <p>Hand out statements to students.</p> <p>Have students stand and read the phrase on the paper. Ask the class if the phrase suggests a reason someone should be physically active.</p> <p>The slips of paper that state the benefits of physical activity are:</p> <ul style="list-style-type: none"> • keeps muscles strong • builds strong bones • helps a person feel good • helps a person avoid illness • keeps the heart strong <p>The two slips of paper that give inaccurate responses are:</p> <ul style="list-style-type: none"> • makes a person sleepy • hurts a person's muscles <p><i>We have a long list of reasons it's important to be physically active.</i></p> <p><i>Since being physically active is so beneficial, why aren't people physically active all of the time?</i></p> <p>Answers: Our bodies also need to rest and sleep. We have other things to do, such as studying and eating.</p> <p><i>Even if we can't be active all of the time, we might need to be more active than we are. Doctors and health experts tell us that young people of all ages need 60 minutes of physical activity each day.</i></p>	 <p>Form a walking club with other staff members and students. Walk during recess. Create a chart showing how far you walk or a graph showing the number of steps you take.</p>  <p>Create a list on the board of the benefits of being physically active.</p>  <p>Inform your physical education teacher about this lesson. Ask him or her to emphasize the recommendation that young people should be physically active 60 minutes, preferably every day. Have him or her reinforce weight-bearing activities.</p>
<p>Describe how nutritious foods and physical activity work together.</p>	<p><i>Healthy foods and physical activity work together in many ways to keep us healthy. For example, they work together to build strong bones. Your bones do all of their growing when you are young. They become as strong as they can be by the time you are 25-30 years old. That means you need to be active and eat the foods that will help you grow strong bones <u>now</u>.</i></p>	 <p>Display the poster set, "MyPlate: Know Your Food Groups," for reference.</p>

	<p><i>You need to eat foods that contain the building blocks, or nutrients, calcium and vitamin D. Milk, yogurt, and cheese are good sources of calcium. Tuna and egg yolks are good sources for vitamin D. Some juices and cereals have calcium and vitamin D added. Your skin also produces vitamin D when it is exposed to sunlight. How much vitamin D you get from the sun depends on where you are, how long you are outside, and your use of sunscreen.</i></p> <p><i>But calcium and vitamin D aren't enough. You also need to be physically active. Choosing activities where you are carrying your body's weight, such as running, skipping, and jumping, will build strong bones. Swimming is a good way to be physically active and helps us in many ways, but will not help you build strong bones.</i></p> <p><i>Healthy food and physical activity is a good combination.</i></p>	 Encourage students to learn more about the importance of calcium by playing interactive educational games at the National Institutes of Health website called Milk Matters. <div data-bbox="1036 441 1448 525" style="border: 1px solid black; padding: 5px;"> www.nichd.nih.gov/milk/kids/Pages/kidsteens.aspx </div>
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Application or Skill Practice: Create new “combination” foods and combine foods and physical activities that strengthen bones.

Approximately 15 minutes

Instructional Steps	Script & Detailed Directions	Extensions & Suggestions
<p>Form small groups.</p> <p>Have students create “combination” foods using food pictures.</p>	<p>Form groups with four or five students in each group. Assign a leader and spokesperson.</p> <p>Distribute three or four food pictures to each student. Do not use the combination food pictures.</p> <p><i>With the food pictures in your group, create at least one new combination food. Your new creation must be made from nutritious foods from the food groups. If you wish, you can name your new creation. Avoid foods with “empty” calories.</i></p> <p>After a few minutes, have the spokesperson from each group share one of the “combination” foods his or her group created.</p>	 Decide if you want to leave the foods with “empty” calories in the set of food pictures used. Leaving them in can help you review the difference between “empty” and “nutritious” foods.  Create and publish a recipe book of the students’ new and nutritious “combination” foods. Decorate the book using art supplies or create the book on the computer. Place it in the library for others to read.
<p>Have students combine physical activity and foods that provide calcium and vitamin D using the student worksheet, “Calcium and Vitamin D + Physical Activity = Strong Bones.”</p> 	<p><i>Now let’s see how we can combine foods with physical activity to build strong bones.</i></p> <p>Distribute the student worksheet to each student.</p> <p><i>On your worksheet is a list of foods that provide calcium. Some are also a good source of vitamin D. Select some of these foods to create another combination food.</i></p> <p><i>Next, pick one or two physical activities you enjoy from the list and decide if you will do one activity for 60 minutes or two different activities each for 30 minutes.</i></p>	 Select several weight-bearing physical activities, such as running in place or jumping jacks, and do them for ten minutes each day as a class activity.

Closure: Review the main concepts taught related to combining foods and physical activity.

Approximately 2 minutes

Instructional Steps	Script & Detailed Directions	Extensions & Suggestions
Name personal choices for combination foods and physical activities to try.	<p><i>We have learned a lot about how to combine things: combining different foods so that we get the building blocks our bodies need, and combining physical activity and foods that provide calcium and vitamin D to build strong bones.</i></p> <p><i>What is one new “combination” food you want to try?</i></p> <p><i>What is one physical activity you will do in the next week to build strong bones?</i></p>	
Distribute the family resource sheet, “Calcium and Vitamin D + Physical Activity = Strong Bones.” 	<p><i>Be sure to share this information with your families so they can learn about combining foods in new ways and the importance of building strong bones.</i></p>	
Summarize the unit.	<p><i>We’ve learned how important the food groups are and how some foods will give us building blocks to grow and stay healthy, especially to build strong bones. We also know what foods we should limit. We have also learned about how physical activity works with the food we eat to keep us healthy.</i></p> <p><i>Now we need to use what we know to make good decisions about the foods and drinks we put into our body and how much physical activity we get.</i></p>	





Benefits of Physical Activity



keeps muscles strong

builds strong bones

helps a person feel good

helps a person avoid illness

keeps the heart strong

makes a person sleepy

hurts a person's muscles

**Calcium and Vitamin D + Physical Activity = Strong Bones****FOODS WITH CALCIUM
AND VITAMIN D****Calcium and Vitamin D:**

Milk with vitamin D added
Juices, bread, soy beverages, rice
beverages, and cereal with calcium
and vitamin D added

Calcium:

Cheese
Yogurt
Broccoli
Kale
Collard greens
Bok choy
Canned salmon with soft bones
Almonds

Vitamin D:

Ten to fifteen minutes of outdoor
activity two or three times a week

My Combination Food**PHYSICAL ACTIVITIES**

Gymnastics
Soccer
Ice skating
Walking
Jogging
Dancing
In-line skating
Tennis
Jumping rope
Basketball
Baseball
Your ideas: _____

My Choice of Physical Activity

60 minutes:

OR

30 minutes:

30 minutes:

**STRONG BONES**

Bone Builders

Calcium and Vitamin D + Physical Activity = **STRONG BONES**


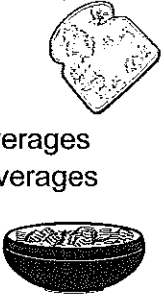
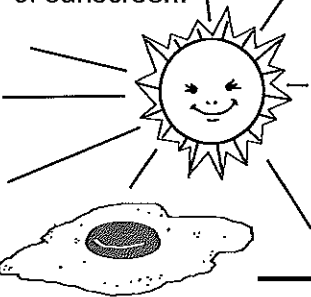
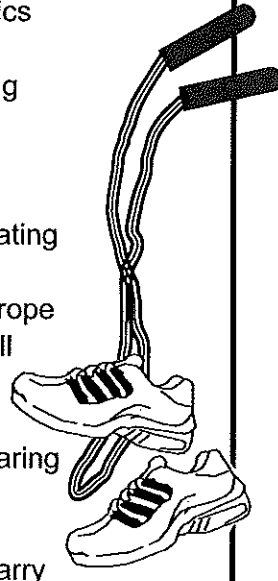
Don't be surprised if your child wants to make a "combination" food. We have been thinking about how we could put different foods together in new ways. The rule is that the foods must be chosen from the five food groups.

Try making "combination" foods at home. Put four or five foods that belong to different food groups on the table. See how creative your child can be combining them for a new taste treat!

We have also been learning which foods help to build strong bones. During childhood and the teenage years, our bones become larger and denser. Eighty-five percent of adult bone mass is acquired by age 18 in girls and age 20 in boys. We reach our largest bone density and strength in our 20's. Now is the time for your child to build strong bones and prevent osteoporosis later in life. To build strong bones, we need three things:

- **calcium**
- **vitamin D**
- **weight-bearing physical activity**

This chart will tell you what foods and types of physical activity are "bone builders."

Calcium	Calcium and Vitamin D	Vitamin D	Weight-Bearing Physical Activities*
<ul style="list-style-type: none"> • Low-fat milk • Low-fat cheese • Low-fat yogurt • Broccoli • Kale • Collard greens • Bok choy and other dark green, leafy vegetables • Canned salmon with soft bones • Almonds 	<p>These products often have calcium and/or vitamin D added:</p> <ul style="list-style-type: none"> • Juices • Bread • Soy beverages • Rice beverages • Cereal • Milk  <p>The products will be labeled as "enriched with calcium" or "fortified with calcium and vitamin D."</p>	<ul style="list-style-type: none"> • Egg yolks • Oily fish, such as tuna • The skin produces vitamin D when it is exposed to sunlight. How much vitamin D you get from the sun depends on where you are, how long you are outside, and your use of sunscreen. 	<ul style="list-style-type: none"> • Gymnastics • Soccer • Ice skating • Walking • Jogging • Dancing • In-line skating • Tennis • Jumping rope • Basketball • Baseball  <p>*Weight-bearing activities require a person to carry his or her full weight.</p>

Make a Family Plan



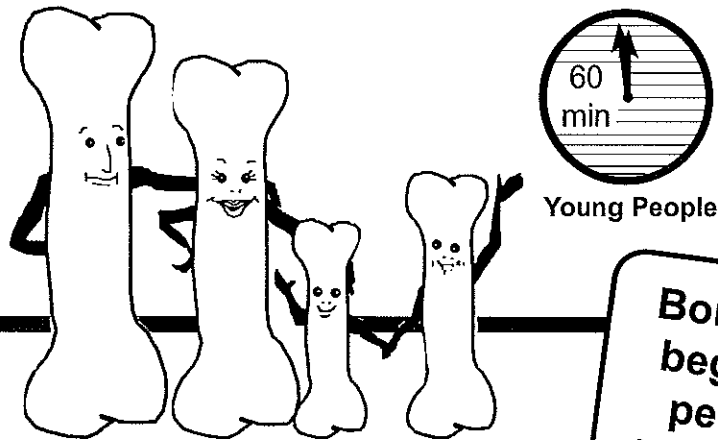
Make a family plan to get the calcium, vitamin D, and physical activity each member of your family needs. The young people in your family will build strong bones. The adults will maintain the bone strength they have.

Calcium and Vitamin D

Most people get calcium from the dairy food group. A second grader, teenagers, and adults should have three cups of beverages or foods from this group. Choose low-fat or fat free dairy beverages and food products. They help everyone maintain a healthy weight and provide as much, and sometimes more, calcium than higher fat options.

Physical Activity

All young people in your family, including teens, should be getting 60 minutes of physical activity each day. Experts say 60 minutes is needed for young people to stay healthy. Adults should get 2 1/2 hours of moderate physical activity weekly or 1 1/4 hours of vigorous physical activity weekly.



Both women and men can suffer from osteoporosis.

Bone loss can begin when a person is in his or her 30's.

Learn More About Healthy Eating and Physical Activity

Visit the U.S. Department of Agriculture's website to learn a healthy eating plan for each member of your family. You will need to submit each person's age, sex and level of activity. Then, the website will tell you exactly how much of each food group each person should eat. www.ChooseMyPlate.gov

Find tips and ideas for increasing your child's physical activity using brochures found at the Centers for Disease Control and Prevention website. www.cdc.gov/HealthyYouth/physicalactivity/publications.htm

Visit the American Academy of Pediatrics website. Click on "Health Topics." www.aap.org/

The American Academy of Pediatrics also has a website for parents. www.healthychildren.org

